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ABSTRACT

Two elementary teachers were given systematic desensitization and behavior modification training to help them manage their feelings of anxiety and establish classroom control. Changes in teacher and student classroom behavior were recorded through daily observations by trained observers. The observers recorded teacher praise and criticism as well as student talk-outs and out-of-seats. A single subject design using back to baseline reversals was used to test the effectiveness of each intervention. The data indicate desensitization was effective in changing all observed behaviors in one teacher's class, but none in the other's. Behavior modification training, on the other hand, was generally effective in changing the behaviors in both classes. Student behavior changed much more than teacher behavior, suggesting the effects of unobserved variables. The results of three self assessment measures by the teachers were mixed. (Author)

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A COMPARISON OF DESENSITIZATION AND BEHAVIOR TRAINING WITH TWO TEACHERS

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Abstract

Two elementary teachers were given systematic desensitization and behavior modification training to help them manage their feelings of anxiety and establish classroom control. Changes in teacher and student classroom behavior were recorded through daily observations by trained observers. The observers recorded teacher praise and criticism as well as student talk-outs and out-of-seats. A single subject design using back to baseline reversals was used to test the effectiveness of each intervention. The data indicate desensitization was effective in changing all observed behaviors in one teacher's class, but none in the other's. Behavior modification training, on the other hand, was generally effective in changing the behaviors in both classes. Student behavior changed much more than teacher behavior, suggesting the effects of unobserved variables. The results of three self assessment measures by the teachers were mixed.

A COMPARISON OF DESENSITIZATION AND BEHAVIOR

TRAINING WITH TWO TEACHERS

An important way to help children change is to work directly with their teachers. Helping a teacher change his/her teaching style may prevent many learning and behavioral problems from developing among students.

Excessive anxiety and frequent negative comments toward students may be associated with less successful teaching (Coates & Thoresen, 1976). Petrusich (1966) reported that high anxiety teachers engaged in more "hostile speech and behavior" than low anxiety teachers and their students tended to be more disruptive. Teacher anxiety and criticism of students often interacts with student disruptions to create a negative cycle in the classroom where both teacher and student behavior maintain the pattern. Madsen, Becker, Thomas, Koser and Plager (1968) demonstrated, for example, that teacher criticism of inappropriate student behaviors actually helped maintain their occurrence. Intervening to change teacher behavior, student behavior, or both could be expected to break this cycle.

Systematic desensitization provides one means of controlling anxiety (Wolpe, 1969). Three studies (Susskind et al, 1969; Dollar, 1972; Giblin, 1972) have reported some success in using desensitization to reduce teacher anxiety, but none assessed the effects of this procedure on observable teacher and student behavior. Since internal responses (e.g., feelings of anxiety) may operate under different contingencies than external behavior, it is important to demonstrate that self-reported internal changes correlate with changes in observable behavior.

An alternative to focusing on reducing teacher anxiety is to focus on

establishing classroom control. Consistently effective changes in student behavior have been attained through the introduction of learning based procedures in the classroom (O'Leary & O'Leary, 1972; Krasner & Krasner, 1973). Precision teaching (Alper & White, 1969) is a comparable approach that teaches teachers the use of observing, charting, and behavior analysis to assist them in evaluating and improving their instruction. Evaluation of this approach has focused on single target behaviors with no attempt to assess its impact on non-targeted student behaviors or on teacher behavior (either covert or overt).

The present study was designed to assess the differential impact of desensitization and behaviorally oriented classroom management techniques on changing overt and covert teacher behavior and overt student behavior. Stated more simply, the major experimental questions were: will reducing teacher anxiety result in positive changes in teacher and student overt behavior, and will a behavior modification approach that focuses on changing student behavior result in changes in teacher overt behavior and a reduction in teacher anxiety?

Method

The study was conducted in an economically disadvantaged elementary school district in the vicinity of Stanford University. Six teachers participated in the program; data from two of these will be presented here.

Design

An ABACAA single subject design was employed: two training/treatment conditions (desensitization and behavior training) were separated by three baseline (non-treatment) phases with a final follow-up evaluation. The sequence was as follows: Baseline I, Desensitization, Baseline II, Behavior

Training, Baseline III, and Follow-up.

Dependent Measures

Classroom Observations. Two common inappropriate student behaviors (talk-outs and out-of-seat) and two categories of teacher behavior (praise and criticism) were observed for 30-50 minutes daily during arithmetic or reading periods. Two observers were trained to a minimum 70% level of inter-observer agreement (agreements divided by agreements plus disagreements) and recorded the occurrence or nonoccurrence of each target behavior during ten second intervals throughout the observation period. The intervals were timed through use of a ten second beeper audible through an earplug. For the student behaviors the whole class was observed as if it were a single student. Thus, if one or more children performed one of the target behaviors a single mark was recorded for that interval. The data for each variable was transformed into frequencies for each observation period.

The teachers and students were unaware of the content of the observations. Also, the observers were not told any details regarding the study and were not informed of any of the experimental phases as they occurred. During the study interobserver agreement ranged between 71% and 93% with a mean of 77%.

Self Report Measures. Three self report measures were administered to the teachers on three occasions during the study: before Baseline I, after Desensitization, and after Behavior Training. These measures were chosen to examine changes in each teacher's anxieties and self-perceptions. They consisted of the Fear Survey Schedule (FSS) (Bandura, Blanchard & Ritter, 1969), the S-R Inventory of Anxiousness (SR) (Endler, McHunt & Rosenstein, 1962) modified to measure response to three common teaching situations, and the favorable and unfavorable t scores from the Gough Adjective Check List

(Gough) (Gough & Heilbrun, 1965). A ratio was made of the two Gough scales by dividing the unfavorable t score by the favorable. The ratio was used as an indication of self criticism, with scores above 1.00 representing a predominance of negative feelings and those less than 1.00 a predominance of positive feelings.

Structured interviews were also conducted following each treatment to assess each teacher's reactions to the training and any changes she may have noticed personally or in her classroom.

Treatments

Systematic Desensitization

Eight group sessions were held led by a doctoral student trained in this technique. Sessions 1-3 were devoted to instruction in physical relaxation and to the construction of a common situation hierarchy dealing with classroom problems. Sessions 4-8 involved progressing through the hierarchy paced to the slowest member. Both teachers successfully completed the hierarchy by the eighth session.

Behavior Training

This intervention involved training in the Precision Teaching system of observation and evaluation of teaching effectiveness combined with various behaviorally oriented classroom management techniques. A series of ten sessions were held twice weekly for five weeks. Selected excerpts from written materials were assigned prior to each session. The readings, discussion and demonstrations pertained to observing student behavior in the classroom, recording and charting using the Precision Teaching system (see Alper & White, 1969), using social and other responses as contingent reinforcers, shaping responses and using social modeling. A major focus involved observing the antecedents and consequences of students' behavior.

Criterion tests were given covering the assigned reading materials at each session. Both teachers passed each test at the 90% correct level.

During each session specific behavior change projects carried out by the teachers were discussed, data examined and changes in various interventions suggested. Individual projects were chosen by the teachers and were unrelated to the variables being observed in the classroom.

Results

Teacher A

Figure 1 presents the daily frequencies for the four classroom observation variables for Teacher A. The desensitization produced changes in the predicted directions for all four behaviors. Following the termination of this treatment, however, all variables regressed toward pre-intervention levels. The Behavior Training reversed these trends for all variables although the initial change was subsequently lost for the two teacher variables. Daily frequencies during Baseline III and Follow-up indicated that the large reduction in Student Out-of-seat and Talk-outs were maintained whereas little or no change was maintained for Teacher Praise and Criticism.

Figure 1 about here

Figure 2 presents the self report scores for Teacher A. All three measures show a reduction after desensitization followed by increases after Behavior Training. Desensitization was clearly more effective in producing change in these self report variables.

Figure 2 about here

Both interventions were effective in producing reductions in the two student variables. Desensitization produced less permanent results than Behavior Training; frequencies began increasing immediately after the cessation of treatment during Baseline II. The reductions during Behavior Training were maintained with only slight increases during Baseline III and Follow-up.

Desensitization produced major effects in Teacher A's behavior toward the end of the intervention while Behavior Training produced a strong initial effect which later diminished. This suggests one reason why the self report measures indicated desensitization more effective: the testing for desensitization corresponded to the point where it had its major effect, while the testing for behavior training occurred after its major effect had been lost. Judging from the classroom observations, both interventions were effective, but at different points in their respective phases.

The large reduction in the student behaviors tended to overshadow changes in teacher behavior and suggest the presence of powerful unobserved variables. Teacher A indicated following desensitization that she had stopped drinking a cocktail before supper to relax. Later, her District Supervisor spontaneously remarked to one of the authors that he had noticed many positive changes in her behavior at district meetings. In her interviews, she reported wide ranging effects on her personal as well as professional behavior as a result of the two interventions.

During Behavior Training, Teacher A thoroughly reorganized her classroom procedures; changes which may have helped maintain the low level of student out-of-seat and talk-out behavior by providing competing appropriate responses. This could also account for the observed changes in student behavior without appreciable changes in teacher behavior.

Teacher B

Figure 3 presents the daily frequencies for the classroom observation variables for Teacher B. In contrast to Teacher A, desensitization provided no effect on any of the observed behaviors in Teacher B's classroom. Behavior training, however, did produce changes in the desired directions for all observed variables. Following behavior training, student talk-outs and teacher praise returned to their original levels while student out-of-seat and teacher criticism stabilized at levels below those of Baseline I.

Figure 3 about here

Teacher B's three self report scores are reported in Figure 2. Most obvious is the inconsistency between the measures. The large reported decrease in feared situations (on the FSS) after behavior training together with the lack of change after desensitization supports the classroom observations. However, Teacher B's self reported anxiety in classroom situations (the S-R Inventory) showed a major reduction after desensitization, as did her self-criticism ratio. Thus, while desensitization produced changes in anxiety and self-esteem, these internal changes did not translate into externally observable changes. Behavior training, on the other hand, did effectively change observable teacher and student behavior but demonstrated mixed results in altering this teacher's internal states. These data point out the error that could result from assuming that changes on self reported indices necessarily reflect changes in overt behavior (and vice versa).

Discussion

The variation of effects found in this study demonstrates the importance of assessing the effectiveness of an intervention from multiple perspectives.

Had only the self report data been gathered desensitization would have appeared more effective, whereas the classroom observations demonstrate mixed changes for this treatment. The behavior training intervention, on the other hand, showed more consistent observable behavior changes but less on the self report measures. The most consistent impact of each intervention was the behavior it focused upon (internal states for desensitization and observable behavior for behavior training). This argues for tailoring the treatment specifically for the changes desired without assuming that generalization from internal states to external behavior (or the opposite) will occur. Generalization did occur, however, and produced some strong but inconsistent changes. More research is needed to determine how generalization of treatment effects can be enhanced.

The potency of the interventions could possibly have been increased had several alterations been made. Teachers could be provided with daily feedback on their own behavior since a knowledge of results has been demonstrated as an effective change agent (see Hall, Lund & Jackson, 1968; Hall, Panyon, Rabon & Broden, 1968). Also, no systematic attempt was made to alter observed teacher behaviors in behavior training. Specifically focusing on decreasing teacher criticism and increasing praise could well have produced more powerful effects. This seems particularly true given the limited effects of the interventions on teacher praise. Identifying and praising appropriate student behavior has been found to be a more powerful change technique than simply reducing criticism in that it also provides direction as to what behaviors will be reinforced (see Bandura, 1969). Finally, no reinforcement was provided for teacher behavior changes that did occur. It was originally assumed that teacher behavior changes would be rewarded and maintained by desirable student behavior changes (such as a reduction in out-of-seats and talk-outs). However, such changes are not necessarily strong

enough to maintain teacher changes. Perhaps more importantly, such student changes are not always seen as the result of teacher behavior changes and thus do not function as reinforcers. Previous research has shown that behavior change is much greater when a person is aware of the contingencies of his/her behavior (Ayllon & Azrin, 1964). Providing teachers with feedback from the classroom observation might have aided them in connecting changes in their students' behavior to changes in their own behavior.

As the study progressed, it became clear that the classroom observations were too narrow and limited to capture the important variables that were operating. An obvious omission was that appropriate student behaviors were not observed nor were contingent teacher praise and criticism. Changes in the contingencies between teacher praise and criticism and student behavior could radically alter student behavior even though the overall levels of teacher praise and criticism did not change. Also, the observation of appropriate student behavior would provide data on the logical transition from ignoring inappropriate student behavior to praising appropriate behavior.

This study demonstrates the utility of working directly with teachers as a means of producing changes in student behavior. Not only is this an efficient use of a counselor's time, but helps insure the maintenance of change once the consultation is over since the teacher can continue to implement the program. However, the variation of effects indicates that a single successful teacher training approach is unlikely. Systematic assessment of both internal and external response competencies may be necessary to provide baseline data for the design of individually focused training experiences (Thoresen, 1973). Given such competencies, teachers may be able to alter the classroom and school environment in ways that more effectively enhance the development of students as individual persons.

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FIGURE

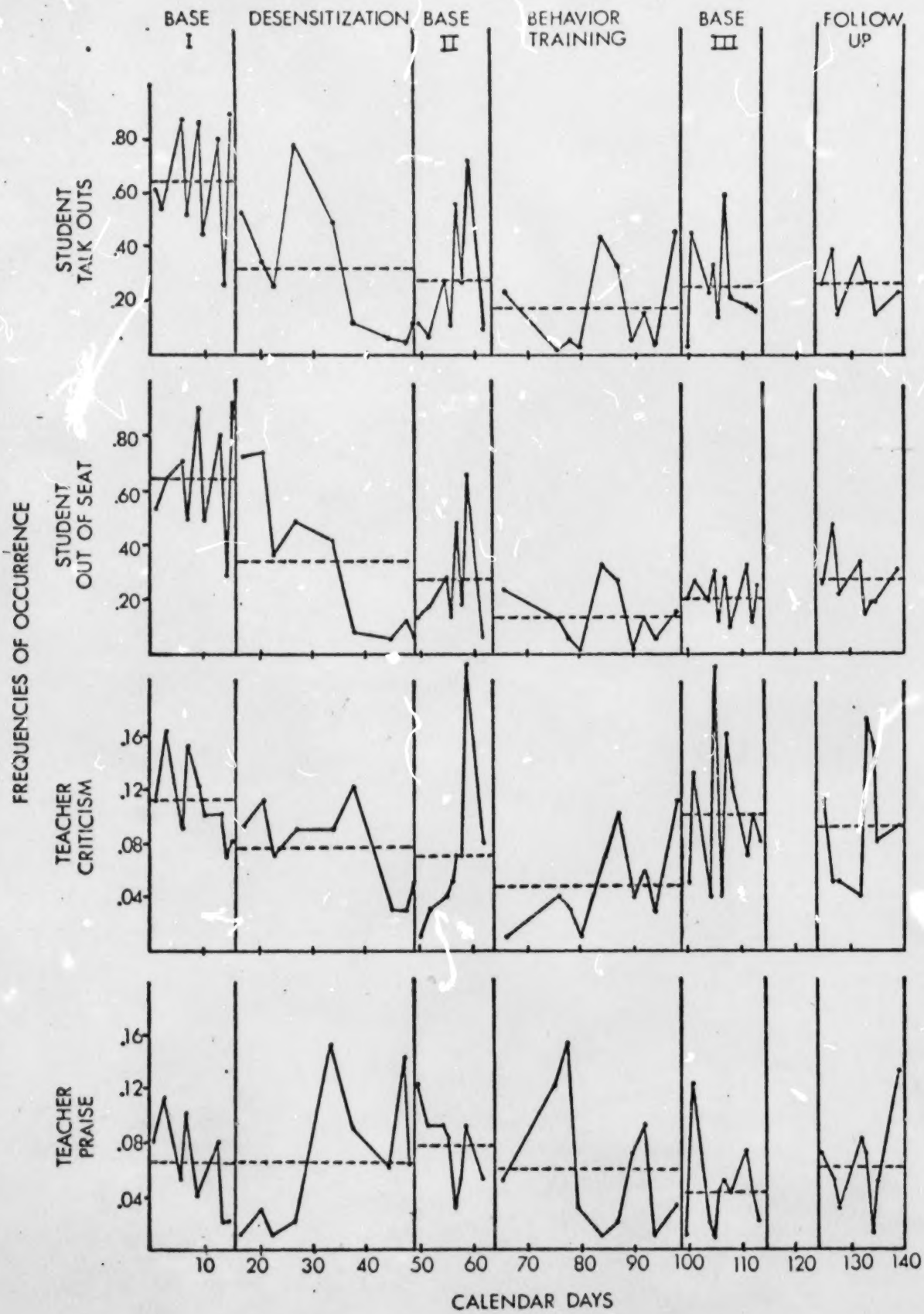

Figure 1: Frequencies of occurrence for four classroom behaviors in Teacher A's class. The dotted lines represent the means for each phase.

FIGURE 2

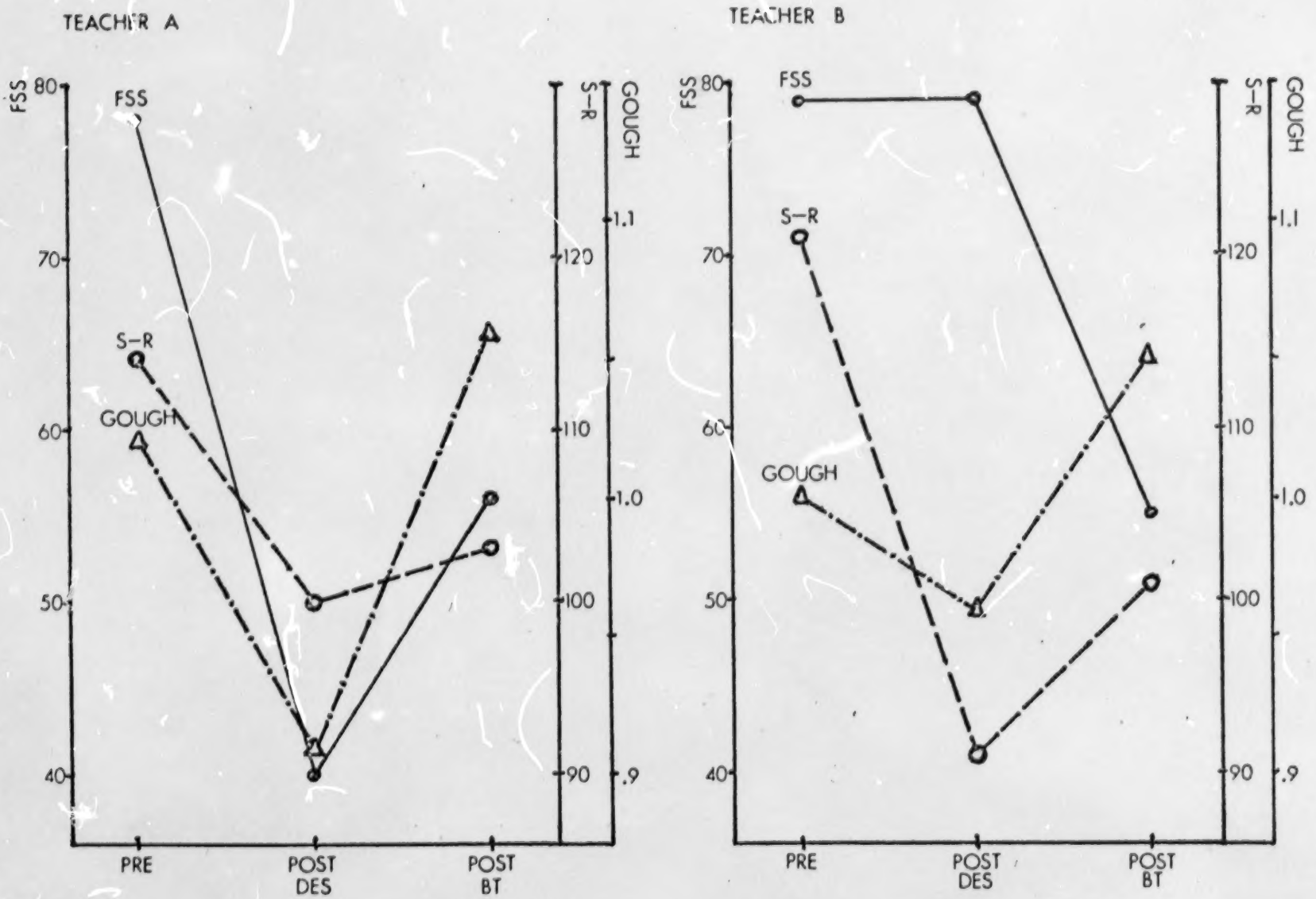

Figure 2: Self report scores for Teachers A and B on the Fear Survey Schedule (FSS), the S-R Inventory of Anxiousness (S-R), and a ratio from the Gough Adjective Checklist (Gough) of unfavorable to favorable self descriptors.

FIGURE 3

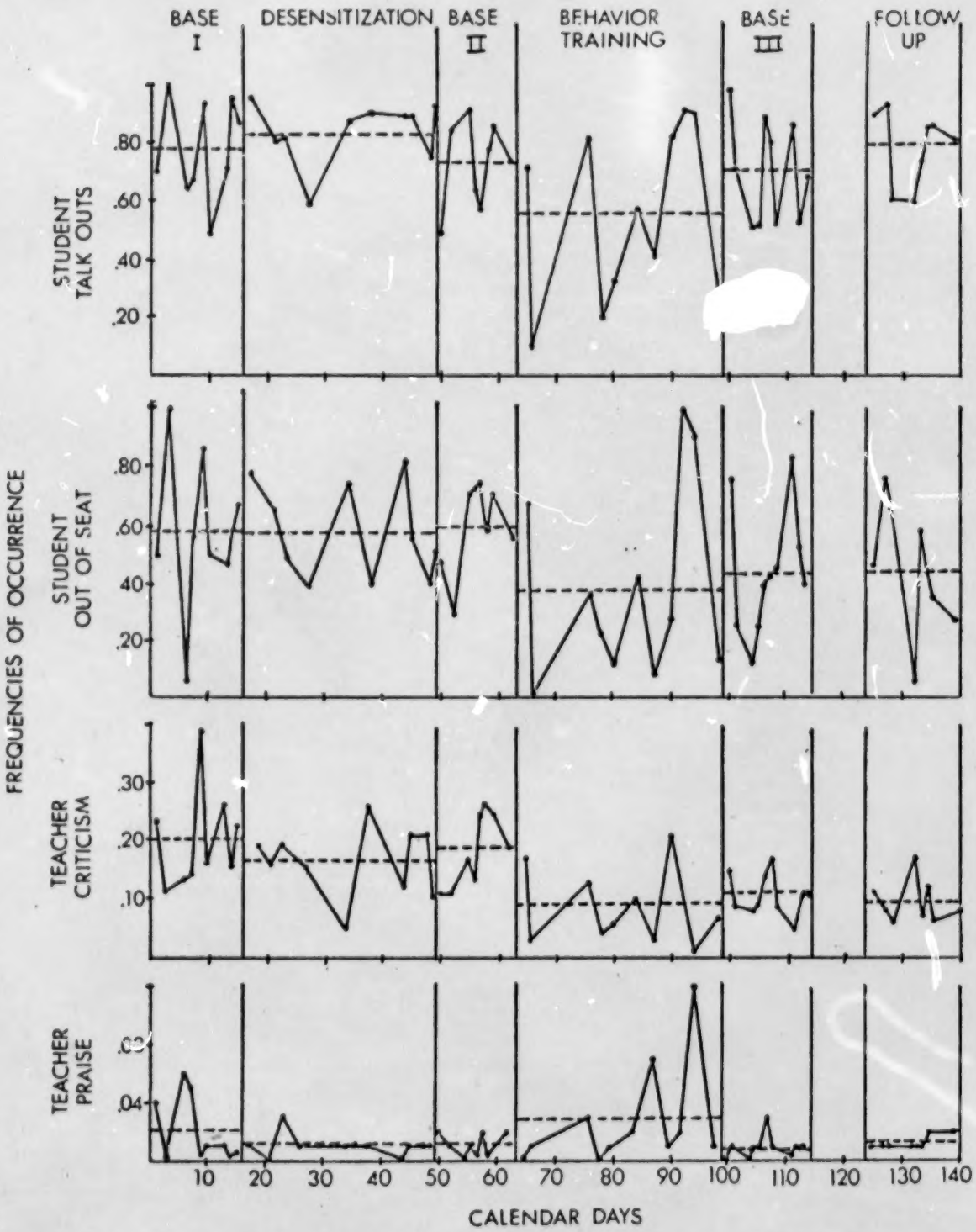

Figure 3: Frequencies of occurrence for four classroom behaviors in Teacher B's class. The dotted lines represent the means for each phase.